Nitidulid Notes and Descriptions (Coleoptera).

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Epuraea flavomaculata Mäklin is a distinct species and not closely related to *terminalis* Mann., or *immunda* Sturm, with which it was considered synonymous by Reitter in 1873. It is easily distinguished from the latter by its quadrimaculate elytra and the two structural characters, namely, middle tibiae of the male unmodified and intercoxal process of abdomen broad and obtuse; characters which apparently neither Reitter nor Horn could observe in their examination of Mäklin's types. This species therefore belongs to Group II of Horn's key, among the species with abdominal intercoxal process broad and obtuse. A key for these species is proposed below.

The type specimens were taken from the Kenai penninsula, Alaska, under the bark of trees. There is in the U. S. National Museum a series of this species determined by the late E. A. Schwarz and collected by Mr. Hubbard at Beaver Mine, Algona, Ontario, Sept. 14 and 16, 1889. Other records of this species are Detroit, Michigan, Itasca Park, Minnesota, Mt. Washington, New Hampshire and Cloudcroft, New Mexico.

Key to *flavomaculata* and allies

1. Elytra not spotted ..... (2)
   Elytra spotted ..... (4)
2. Elytra very broadly truncate behind, apex subequal in width to base; male first ventral with 2 longitudinal rows of hairs ..... *alternas* Grouvelle
   Elytra narrowing to the truncate apex; male first ventral not modified ..... (3)
3. Elytra narrowly margined; pubescence above grey, not conspicuous ..... *ovata* Horn
   Elytra more widely margined; pubescence above long, conspicuous due to silvery luster ..... *populi* sp. nov.
4. Disc of pronotum uniformly dark colored; posterior male femora simple; body oblong, depressed.... *flavomaculata* Mäklin
   Pronotum with a median longitudinal pale stripe; posterior male femora obtusely subangulate; body form more oval and convex ..... *peltoides* Horn

Epuraea populi sp. nov.

♂ *Holotype.* Oval, subdepressed. Body piceous, under surface with brownish tinge. Moderately shining, sparsely clothed with prostrate, silvery hairs, which often are not directed straight backwards. Body above and below with uniform, close, moderately coarse punctures with the following exceptions: mesosternum, prothorax below the basal angles and on a space external to the coxae and extending anteriorly, impunctate; prosternum sparsely, indistinctly punctate.

Labrum not deeply bilobed. Antennal joints 3-5 elongate, equal in length to club, 3 and 5 subequal in length, 4 shorter, 5-8 moniliform, club elongate, 1½ times longer than wide.

Thorax 2.23 times broader than long, broadest at basal third, thence narrowing slightly to the square basal angles and hardly arcuately converging to the rounded anterior angles, base very feebly bisinuate, apex broadly emarginate, lateral margins explanate. Elytra conjointly slightly longer than broad, lateral margins explanate, feebly arcuate and narrowing posteriorly to the truncate apical margin. Upper surface of body slightly irregular due to three feeble transverse impressions on disc of each elytron one at basal and apical fourths and one just before the middle, and an inward extension of the depressed lateral thoracic margin at the basal third. Tarsi dilated; tibiae slender, not modified.

Intercoxal process of abdomen broad and obtusely angled. Male with the extra anal segment.

Dimensions: length 2.81 mm., width 1.74 mm., pronotum .71 mm. long, 1.6 mm. wide at widest point, elytra 1.74 mm. wide, 1.79 mm. long.

♀ *Allotype.* Quite similar to the male in all respects but lacking the dorsal anal segment. Dimensions: length 2.86 mm., width 1.79 mm., pronotum .7 mm. long, 1.53 mm. wide, elytra 1.89 mm. long, 1.79 mm. wide.

Specimens vary from 2.2 to 3.32 mm. in length, and are 1.6 to 1.64 times longer than wide. The under surface is usually slightly browner in color than the upper, though from above the lateral margins of pronotum and elytra are also brownish. There are minor variations in the squareness of the truncature of the elytral apex, width of pronotum in comparison to the elytra, and position of the widest point of the thorax (in some this is appreciably behind the basal third), but none of these characters can be correlated with sex. The tip of the

abdomen is deflexed in most specimens, and therefore usually completely concealed from above.

This species is most closely allied to *flavomaculata,* from which it is distinguished by its uniform dark color, oval shape and more conspicuous vestiture. From *ovata* it is distinguished by the vestiture, broader form, more widely margined elytra, and thorax scarcely constricted at base.

Holotype and allotype were collected at Itasca Park, Minnesota, June 15, 1937, and July 9, 1936, respectively; 11 paratypes were collected at the same locality, May 17 to June 15, 1937; 2, Ramsey County, Minn., July 25, 1936; 1, Olmsted County, Minn., C. N. Ainslie Collection; 2, Cheboygan County, Michigan, June 30 and July 5, 1935, collected at light by Milton Sanderson.

The holo- and allotype are deposited in the United States National Museum ; other specimens are in the collection of the American and Field Museums of Natural History, University of Minnesota, University of Kansas, K. M. Fender, Academy of Natural Sciences, Philadelphia, and the author.

All but three of the specimens were taken by myself upon the bark of aspen, *Populus tremuloides,* in a recently dead or dying condition. These trees emit a yeasty odor due to fermentation and are usually infested with ambrosia beetles. The beetles are semi-active during the day.

Nitidula flavomaculata Rossi is a European species not previously recorded from this continent. There are before me specimens from Oakland and Almeda County, California, Oct. 1933 and March 1934 respectively, collected by J. E. Blum, and one specimen in the U. S. National Museum is labeled "Washington, D. C., 13-4-34". This species is piceous, with the legs, antennal stem, sides of pronotum, and epipleura, humeral region and discal spot of each elytron yellow. The discal spots are nearly contiguous, being separated by a very narrow sutural dark stripe, and are joined to the humeral spot by a narrow stripe of yellow.

Nitidula carnaria Schäll. was first recorded in this country in 1926, in Leonard's "A List of the Insects of New York," from "N. Y." and West Point, N. Y. I later recorded it

from Madison, Wisconsin, and Oakland, California. Other records are New England, Aurelius, Michigan, Marion County, Indiana, Urbana, Illinois, Easton, Pennsylvania, and New Foundland, New Jersey. The Pennsylvania specimen was collected May 7, 1909.

Colopterus gerhardi sp. nov.

From Illinois comes the surprising discovery of a *Colopterus* remarkably distinct from our other five well-known species.

♂ *Holotype.* Broadly oval, depressed, elytra individually broadly convex. Nearly uniform testaceous brown, the head, scutellum, outer and apical elytral margins and an oval median thoracic spot vaguely darker, antennae testaceous at base, gradually darkening to the piceous club. Moderately shining, sparsely clothed with short, yellow pubescence.

Head moderately punctate, pronotal punctures coarse, shallow, separated by more than their diameters upon the disc, but more closely spaced laterally, scutellum impunctate on posterior fourth, elytral punctures ill-defined, arranged in 19 indistinct but definite rows, abdominal tergites regularly punctured, the punctures of the same size and density as on head and scutellum, punctuation below slightly finer, except for the impunctate sides of the prothorax. Labrum bilobed; antennal segments 2-6 longer than wide, 3 longest, 6-7 moniliform, 8 transverse, club 3-segmented, 1.6 times as long as wide.

Pronotum strongly transverse, 2.25 times as wide as long, widest slightly before the basal angles which are rectangular, sides regularly arcuately narrowed to the apex, basal margin sinuate on each side, disc with a well-defined sulcus extending medianly from the basal angles and continued by a vague depression which recurves to the basal margin. Elytra strongly descending on the sides to the narrowly reflexed lateral margins; posterior margin and suture, especially just behind the scutellum, depressed, each elytron broadly convex when viewed either from the side or from behind, apices each rounded truncate, exposing two abdominal segments and the posterior angles of the third.

Lateral margin of last abdominal sternite with six fine denticles, apical margin bisinuate, nearly truncate, due to the presence of the anal male segment, which is nearly concealed from above.

Dimensions: length 3.5 mm. with head somewhat deflexed, width 2.23 mm., pronotum .92 mm. long, 2.08 mm. maximum

width, 2.04 mm. at basal angles, 1.13 at anterior angles, elytra 2.23 mm. wide, 1.93 mm. at humeral angles, 1.47 mm. maximum length and 1.26 mm. from base of scutellum to apex of suture.

Holotype. Olive Branch, Illinois, X: 7:09, under bark of sycamore, Wm. J. Gerhard, collector, in the Field Museum collection. The type locality is near Thebes, Alexander County, southern Illinois, on the edge of the Mississippi River bottom.

This species is related to *Colopterus morio* Er. by its sulcate thorax, but differs strikingly from all our forms by the convex elytral outline. In this character it resembles *inflatipennis* Sharp of Mexico, but that species lacks the pronotal sulci. It cannot be identified as any of the numerous neotropical species, and none of the latter have been recorded north of Mexico.

Carpophilus rufus Murray has been considered by Horn to be a variety of *melanopterus* Erichson. There is no apparent external structural character by which the two may be separated, and an examination of the male genitalia has not shown significant differences. However the color pattern is fundamentally different, and for this reason I believe it will prove to be a valid species. A large number of *melanopterus* have been observed and they are very constant in coloration. The body is red, with black antennal club and jet black elytra, and this black color develops before the body wall has hardened. *Rufus,* on the other hand, has always reddish brown elytra, and in fully colored specimens the body is conspicuously darker than the elytra, just the reverse of the case in *melanopterus*. The only host data for *rufus* I have seen is cactus blossoms, and these were probably prickly pear. *Melanopterus* occurs in the flowers of yucca, and apparently is spread by the cultivation of its host plant, for it has been taken at Amherst, Massachusetts. Other localities in the literature and from my records are Columbia, South Carolina, Florida, Georgia, Texas, Mexico; Downer's Grove, Dubois and Urbana, Illinois, and Putman and Marshall Counties, Indiana. *Rufus* has been recorded from Central America and "U. S."; other localities are Eastland County, Texas, Hamilton County, Kansas, Meadville, Nebraska, and Rapid City, South Dakota.